ANNUAL REVIEW OF FISH DISEASES

Volume 3 1993

CONTENTS

	v	**Memorial**
	1	**Dedication**
M. Faisal **F.M. Hetrick**	3	**Preface**
		Articles
A.E. Toranzo **J.L. Barja**	5	Virulence Factors of Bacteria Pathogenic for Coldwater Fish
R.L. Thune **L.A. Stanley** **R.K. Cooper**	37	Pathogenesis of Gram-Negative Bacterial Infections in Warmwater Fish
R. Kusuda **F. Salati**	69	Major Bacterial Diseases Affecting Mariculture in Japan
A.J. Evenden **T.H. Grayson** **M.L. Gilpin** **C.B. Munn**	87	*Renibacterium salmoninarum* and Bacterial Kidney Disease—The Unfinished Jigsaw
M.D. Furones **C.J. Rodgers** **C.B. Munn**	105	*Yersinia ruckeri*, the Causal Agent of Enteric Redmouth Disease (ERM) in Fish
I. Dalsgaard	127	Virulence Mechanisms in *Cytophaga psychrophila* and Other *Cytophaga*-Like Bacteria Pathogenic for Fish
S.G. Newman	145	Bacterial Vaccines for Fish
F.M. Hetrick **R.P. Hedrick**	187	New Viruses Described in Finfish from 1988–1992
P.R. Bowser **J.W. Casey**	209	Retroviruses of Fish
J.C. Leong **J.L. Fryer**	225	Viral Vaccines for Aquaculture
B.L. Nicholson	241	Use of Monoclonal Antibodies in Identification and Characterization of Fish Viruses

Continued next page

INDEXED IN Environmental Periodicals Bibliography, CAB International

ISSN 0959-8030
(963)

R.A. Elston	259	Infectious Diseases of the Pacific Oyster, *Crassostrea gigas*
R.P. Hedrick **E. MacConnell** **P. de Kinkelin**	277	Proliferative Kidney Disease of Salmonid Fish
E.J. Noga	291	Water Mold Infections cf Freshwater Fish: Recent Advances
J.T. Zelikoff	305	Metal Pollution-Induced Immunomodulation in Fish
F. Chiappelli **C. Franceschi** **E. Ottaviani** **M. Farnè** **M. Faisal**	327	Phylogeny of the Neuroendocrine-Immune System: Fish and Shellfish as Model Systems for Social Interaction Stress Research in Humans
		Book Review
E.L. Cooper	347	*Biomarkers: Biochemical, Physiological, and Histological Markers of Anthropogenic Stress* edited by R.J. Huggett, R.A. Kimerle, P.M. Mehrle, Jr., and H.L. Bergman
	349	Author and Keyword Index Volume 3, 1993